



K24U 0713

Reg. No. : .....

Name : .....

IV Semester B.Sc. Degree (C.B.C.S.S. – O.B.E. – Regular/Supplementary/  
Improvement) Examination, April 2024  
(2019 to 2022 Admissions)

COMPLEMENTARY ELECTIVE COURSE IN CHEMISTRY/POLYMER  
CHEMISTRY

4C04CHE/PCH(BS) : Chemistry (for Biological Science)

Time : 3 Hours

Max. Marks : 32

**Instruction : Write only in English.**

SECTION – A

Very short answer type. Answer **all 5** questions. **Each** carries **1** mark.

1. Give the structure of thiophene.
2. To which nitrogenous base does thymine form hydrogen bonds in DNA ?
3. Name the enzyme which hydrolyses proteins.
4. Which is the vitamin that contains cobalt ?
5. Write any one iron-porphyrin complex in biological system. (5×1=5)

SECTION – B

Short answer type. Answer **any 4** questions out of 6. **Each** carries **2** marks.

6. What is meant by inversion of sucrose ?
7. Pyridine is more basic than pyrrole. Explain.
8. What is meant by DNA replication ?

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9. Define the term Zwitter ion.
10. Discuss the biochemistry of zinc.
11. Write a note on nitrogen fixation. (4×2=8)

SECTION – C

Short essay type. Answer **any 3** questions out of 5. **Each** carries **3** marks.

12. Explain mutarotation with example.
13. What is the difference between a nucleoside and a nucleotide ?
14. Write a note on the colour reactions which serve as tests for proteins.
15. Describe the mechanism of enzyme action.
16. How does sodium-potassium pump work ? (3×3=9)

SECTION – D

Long essay type. Answer **any 2** questions out of 4. **Each** carries **5** marks.

17. a) Describe the conversion of glucose into fructose. 3  
b) How will you distinguish between glucose and sucrose ? 2
18. Justify the statements.  
a) Pyrrole is aromatic  
b) Pyridine undergoes the nucleophilic substitution at 2-position.
19. Write a note on structure of proteins.
20. Explain the classification of hormones. (2×5=10)